

0068538

SAF-RC-001
Industrial Hygiene Sampling
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG

05I-4703-01

SAF-RC-001

Rad only ☒ Chem only Rad & Chem

☒ Complete Partial

300 Area 334A Bldg

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Cover Page

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Report Identification Number: 05I-4703-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R300XX J451
Payroll#: 73399



Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
10 Nov 2005	J10JT5	05I44264	NMAM 7300M	G05BG00Q	MCE
10 Nov 2005	J10HM8	05I44265	NMAM 7300M	G05BG00Q	MCE
10 Nov 2005	J10HM7	05I44266	NMAM 7300M	G05BG00Q	MCE

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Name: Lisa M. Reid
Title: Chemist
Date: November 16, 2005



Case Narrative Page

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General Set Information: There are 3 samples in set 05I-4703-01, 3 samples in set 05I-4705-01, 4 samples in set 05I-4706-01, 4 samples in set 05I-4707-01 and 10 samples in set 05I-4708-01 that were analyzed for beryllium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C (with a thermometer reading of 98°C) for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of $\pm 10\%$.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.01 ug/sample.

Method Blank Analysis: No beryllium was found in the media blank sample above the Contract Required Detection Limit (CRDL). No lead was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): NA.

Laboratory Control Sample and Duplicate Analysis: Two Laboratory Control Samples (LCSs) and two Laboratory Control Sample Duplicates (LCSDs) were prepared and analyzed with the sample batch.

The LCS results for beryllium were within the control limit of $\pm 20\%$. The Relative Percent Differences (RPD) between the LCS and the LCSD were within the control limit of 20%.

Replicate Analysis: Three samples in this batch were replicated. The RPDs between the samples and the replicates were within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:

Final result for aqueous samples ($\mu\text{g}/\text{sample}$) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination ($\mu\text{g}/\text{L}$)

B = Concentration factor from sample preparation

= $\frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$

Sample

C = Dilution performed at time of analysis

Example Calculation: $(1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$

Miscellaneous Comments: None.



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Payroll#: 73399

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium $\mu\text{g}/\text{sample}$		Beryllium $\mu\text{g}/\text{m}^3$	Air Volume L	
J10JT5	05I44264	15 Nov 2005	<0.01	U	<0.038	264.	
J10HM8	05I44265	15 Nov 2005	<0.01	U	**	0.00	
J10HM7	05I44266	15 Nov 2005	0.013		**	0.00	
Limit of Detection (LOD)			0.01				
Required Detection Limit (RDL)							

U - Parameter not detected above LOD.
J - Parameter between LOD and RDL.



QC Summary Page

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Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF: RC-001 / R300XX J451
Payroll#: 73399

Batch ID: G05BG00Q

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-238263-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
QC-238263-1	LCS	Beryllium	µg/sample	10.1	NA	10.0	101.	NA
QD-238263-1	LCSD	Beryllium	µg/sample	10.5	10.1	10.0	105.	3.61

MB - Method Blank

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MSD - Matrix Spike Duplicate

LD - Laboratory Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

$LCS, LCSD \text{ Percent Rec.} = (\text{Result} / \text{Target}) * 100.0$

$MS, MSD \text{ Percent Rec.} = ((\text{Result} - \text{Parent}) / \text{Target}) * 100.0$

$LCS, LCSD \text{ Relative Percent Diff.} = ((|\text{LCS} - \text{LCSD}|) / ((\text{LCS} + \text{LCSD})/2.0)) * 100.$

$MS, MSD \text{ Relative Percent Diff.} = ((|\text{MS} - \text{MSD}|) / ((\text{MS} + \text{MSD})/2.0)) * 100.$

$LD \text{ Relative Percent Diff.} = ((|\text{Parent} - \text{LD}|) / ((\text{Parent} + \text{LD})/2.0)) * 100$

OSI-4703-01



CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: Daniel Wolf	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No.: 531-1229	Project Coordinator: Joan H. Kessner	Data Turnaround: 24 hr.
Payroll #: 73399	Sampling Location: 300 Area / 334A Bldg	SPECIAL INSTRUCTIONS: All relevant COAs must be provided: R 300 X X J 451	SAF No. RC-001	
Type of Sample: Beryllium		ANALYSIS METHOD (SPECIFIC): Niosh 7300 Bz	Method of Shipment: Federal Express	
Shipped To: DataChem Salt Lake City UT	Wipe Sample Media: Ghost <input type="checkbox"/> Yes <input type="checkbox"/> No Other: N/A		Bill of Lading/Air Bill No.: 8541 93375616	
POSSIBLE SAMPLE HAZARD/REMARKS: Be	MATRIX: A - AIR WI - WIPE X - OTHER	Preservation (i.e., cooling required, etc.):	No	No
Special Handling and/or Storage: N/A			No	No

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area (cm ²)	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold
J10J55	A	11/10/05	264	Personal			X		
J10HM8	A	11/10/05	N/A	Blank			X		
J10HM7	A	11/10/05	N/A	Blank			X		

WCH-SH-202 (08/29/2005)

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Enter on line below the first Sample Number from Page One:

J10555

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
SIGN / PRINT NAMES / USE MILITARY TIME			
Relinquished By/To:	DATE / TIME	Received By/From:	DATE / TIME
<i>Janet D. Wolf</i> Daniel Wolf	11/10/05 1630	3746 Hwy, Room 16, Locked Cabinet	11/10/05 1630
David Warren / David Linn	11-14-05 / 1430	David St. John	11/14/05 1430
David St. John with David Seign	11/14/05 1500	Fed Ex	
Fed Ex		Julie Waggoner	11/15/05 0900
Metals 3N			
LABORATORY SECTION	Received By: <i>Julie Waggoner</i>	Title	DATE / TIME: 11/15/05 0900

REVIEWED BY: _____ DATE: _____

PRINT/SIGN NAME